

### **REMARKS**

In the office action, claims 52-56 have been objected to, and claims 50, 51, 57 and 58 have been rejected under 35 U.S.C. §103. In response, claims 52-56 have been cancelled and new claims 59-63 have been added. Accordingly, claims 50, 51, 57, and 58-63 are pending in this application. Reconsideration is respectfully requested.

### **Objections to Claims**

In the office action, the Examiner has objected to claims 52-56 as being dependent upon a rejected base claim (claim 58). In response, Applicant has cancelled claims 52-56 and added new claims 59-63 which reflect cancelled claims 52-56, but without depending on the rejected base claim. Accordingly, Applicant respectfully submits that claims 59-63 are allowable.

### **Rejections Under 35 U.S.C. §103**

Claims 50, 51, 57 and 58 have been rejected under 35 U.S.C §103(a) as being unpatentable over Nakao. According to the Examiner, Nakao teaches compositions wherein yeasts are fermented to produce CoQ, and that CoQ10 is contained in the cell walls of microorganisms released into the broth.

The Examiner recognizes that Nakao does not teach the compositions with the claimed amounts or ratios of Q10 to glycoprotein, or the culturing of both bacteria and yeast to produce CoQ10.

However, the Examiner contends that it would have been obvious at the time of the invention to optimize such volumes and ratios as a matter of routine experimentation, and that because Nakao suggests various yeast and bacteria which could be cultured to produce CoQ,

there would have been motivation to culture both yeast and bacteria to obtain a CoQ composition. Applicants respectfully disagrees.

Firstly, Nakao et al. may suggest various yeast and bacteria that could be cultured to produce CoQ, however, the claimed invention is directed at CoQ10 compositions only. Nakao et al. disclose two species of microorganisms that will secrete CoQ10 under appropriate conditions, *Pseudomonas denitrificans* and *Neurospora crassa*. Nakao et al. do not disclose or suggest fermenting yeast and bacteria together, in the presence of CoQ10 to obtain the claimed composition.

Secondly, Nakao et al. do not teach the amounts of ubiquinone or the ratio of ubiquinone to glycoprotein as in the claimed invention because Nakao et al. are not adding ubiquinone to a composition. Rather, as discussed above, Nakao et al. disclose a process for encouraging the production of coenzyme Q.

As discussed above, there is no disclosure or suggestion in Nakao et al. of a composition comprising a glycoprotein matrix bound to CoQ10 wherein the glycoprotein matrix is derived from bacteria and yeast. The claimed invention requires that the glycoprotein matrix be derived from yeast and bacteria.

Importantly, the claimed invention requires that the yeast and bacteria used be suitable for consumption by mammals. As mentioned above Nakao et al. disclose two species of microorganisms that may secrete CoQ10 under appropriate conditions, *Pseudomonas denitrificans* and *Neurospora crassa*. Neither of these species are suitable for human consumption.

In order to establish a *prima facie* case of obviousness, one criteria to be met is that the prior art reference must teach or suggest all of the claim limitations. See MPEP §2142.

Applicant has demonstrated the importance of the CoQ10 being bound to a glycoprotein matrix, wherein the glycoprotein matrix is derived from yeast and bacteria suitable for consumption by mammals.

Nakao et al. do not teach or suggest all of the claimed limitations of the present invention. Therefore, based on the foregoing discussion, Applicant's claimed invention is not obvious over Nakao. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §103(a) based on Nakao et al. be reconsidered and withdrawn.

In light of the foregoing amendments and remarks, Applicant respectfully submits that the application is now in condition for allowance. If the Examiner believes a telephone discussion with the Applicant's representative would be of assistance, she is invited to contact the undersigned at her convenience.

Respectfully submitted,



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Lauren T. Emr  
Attorney for Applicant  
Reg. No. 46,139

HOFFMANN & BARON, LLP  
6900 Jericho Turnpike  
Syosset, New York 11791  
(516) 822-3550  
LTE:jlw